

ABSTRACT

A method of making a small-diameter through hole having high reliability with regard to a hole wall at a high rate with the energy of a high-output carbon dioxide gas laser without pre-making any hole in a copper foil, forming or disposing a coating or a sheet of an organic substance containing 3 to 97 % by volume of at least one powder selected from the group consisting of a metal compound powder, a carbon powder and metal powder which have a melting point of at least 900°C and a bond energy of at least 300 KJ/mol on at least a copper foil surface to be irradiated with the carbon dioxide gas laser, and irradiating a surface thereof with necessary pulses of the carbon dioxide gas laser to form the penetration hole, and an auxiliary material for use when a penetration hole is made in the copper-clad laminate with a carbon dioxide gas laser, the auxiliary material being a coating or a sheet of an organic substance containing 3 to 97 % by volume of at least one powder selected from the group consisting of a metal compound powder, a carbon powder and metal powder which have a melting point of at least 900°C and a bond energy of at least 300 KJ/mol.

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